Abstract

DIGITAL SUBSCRIBER LINE (DSL) MODEM COMPATIBLE WITH HOME NETWORKS

A cost-effective filter consuming low power and occupying minimal space. The filter may be used in a ADSL modem (or CPE) to filter the signal components other than the ADSL signals. A high pass filter first filters the low frequency components to attenuate (or remove) lower frequency components such as that caused by ADSL transmit echo signals and that used for voice transmission. The high pass filter may be modified by adding a few resistors to limit the voltages of the high frequency signals also. The output of the high pass filter is amplified and passed through a low pass filter to filter the high frequency components (HPNA included). Due to earlier filtering operation of the high pass filter, the signal can be amplified substantially before being sent to the low pass filter. The implementation of the low pass filter is simplified due to the prior amplification.

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